

Volume VII Number 4

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- 1. Stimulate interest in their respective organizations, through articles and reports for publication;*
- 2. Advise the editors of the NEWSLETTER on policy, content, frequency, layout, and other matters; and*
- 3. Review the NEWSLETTER (after publication) to make sure that the viewpoint of their particular organization is represented, and to give evaluation comments to the editors.*

*We feel confident their contributions will be a significant factor in achieving our goal of continued improvement in the quality and overall format of the Newsletter.*

*The Editors*

## People Who Ask – Get Answers!

*Paul Strassmann, Director, Information Services Division, replies to questions on policy, goals, and the general operating environment of ISD – current and planned.*

*All questions were submitted by individuals representing various job levels and functions within ISD.*

*To these people – this issue is respectfully dedicated.*

*The Editors. . . . .*



Paul Strassmann . . . .

### Question 1:

**For the benefit of ISD people who were unable to attend the division meetings held in Rochester – and those who were present but maybe did not fully understand the material presented – would you review the major highlights of 1973 division performance; the outlook for 1974; and comment on selected questions that were submitted?**

Answer:

The highlights were unquestionably:

- The stabilization of the performance of XCC No. 1 towards the end of the year.
- The successful and well-managed manpower build-up for COIN without any major organizational dislocation.
- Excellent performance of the Software Development Department in meeting its commitments.
- Even though we had some schedule, budget and performance slippages, we did not incur in development a major system "blow" during 1973.
- Authorization of substantial additional resources for the XCC to improve performance and to materially reduce difficult working conditions.
- Successful re-structuring of Telecommunications operations.
- Establishment of XCC No. 2, approval of an Uninterrupted Power Supply for Monroe County, and entry into the timesharing business on a large scale.

However, most importantly, 1973 marked a turnaround in the spirit in the ISD organization. I believe this occurred as we recognized that ISD is a sound, permanent, professionally managed concept for structuring complex information processing technologies for Xerox.

The outlook for 1974 continues to be excellent. The Division is keeping up its substantial growth pattern. We are seeing to it that our customers have a sense of confidence in our abilities to deliver results. Even though we have witnessed reductions in the demand for computer services in the last few months, I find these reductions as fulfilling the basic mission of ISD, inasmuch as all of these cutbacks have resulted in a more economic and prudent use of resources. The decreases in computer operations revenues are more than offset by a continued strong demand for software services. As a matter of fact, we have already experienced several upward revisions in the Operating Plan in software. At the same time, ISD continues growing by adding new services to its scope.

I expect ISD to finish 1974 with about \$60 million in revenues. This is a healthy 36% increase over 1973, and a good indicator that the ISD people are doing a proper job.

With regard to the questions asked at the Division Meeting, two major questions were conspicuous. One concerned the most prevalent concern about salaries and inflation: more than one-half of all inquiries asked me to address this matter. I trust that my recent letter, as well as the cost-of-living adjustment, was more responsive to these concerns than I

could show at the meetings. The second question concerned monthly individual educational, personnel development and professional growth matters. A whole set of questions were also significant by their absence, as compared with a year ago. I got the sense during the recent meeting that people are much less concerned today about the organizational stability or purpose of ISD and our relationships with our "customers". This leads me to conclude that the Division is now more job-oriented and more concerned with the motivation of the people to get a job done. I feel that this is a good trend and shows that everyone is now channeling his attention in the right direction.

**Question 2:**

**What are the basic long-term goals of ISD and how will they be achieved?**

Answer:

Our basic long-range goals are:

- To significantly reduce the internal administrative, clerical and general information handling unit costs within Xerox.
- To use the experience of managing the total information environment of a large corporation as a means for testing product concepts that would earn Xerox new markets in the information processing world.

To achieve these goals, ISD has been bringing under specialized, professionally-oriented technology management teams activities which previously lacked such an environment. The result of these changes has been shown in a material improvement in the quality of the long-range planning processes, the increased influence of people whose career is dedicated to information processing management as well as in a number of activities that have been reducing the cost of information services through better efficiency.

Since ISD was organized, it has diversified geographically (XCC No. 2 on the West Coast) and functionally (by expanding into Administrative Processing and Telecommunications). We have further plans to grow geographically as well as functionally. For instance, we have just been asked to manage a corporate-wide administrative productivity program, to administer clerical payroll and personnel, to design electronic and conventional mail systems and to organize the introduction of centralized reproduction duplicators throughout USO.

In the concept testing area, ISD has received tremendous corporate-wide visibility through a Telenet add-on permitting the use of facsimile output terminals, an expanded computer controlled data communications network and APC (Administrative Processing Center) programs which may have significance beyond the specific ISD organizational charter.

I believe that anyone who has observed ISD in the last year should be in a reasonably good position to guess at further diversifications, since the basic organizational approach to

managing our activities is now well in hand and allows great flexibility to Corporate management to use ISD or ISD-like structures with fairly predictable results.

**Question 3:**

**Does Xerox have any plans to include "cost of living" increases in its compensation program?**

Answer:

We have had good success with a salary program geared to performance reviews. However, like most programs, this one is not perfect. During the past year, the combination of wage restraints and inflation meant that Xerox people were hurt financially. Therefore, we had an across-the-board increase in salaries. In more normal times, however, we anticipate that our current program will work well, and I know of no current plan to change it.

**Question 4:**

**In view of the current energy crisis (particularly the gas shortage) is Xerox taking any steps to insure that all its people will have transportation to and from work?**

Answer:

Based on the lifting of the Arab oil embargo, it appears that the gasoline crisis will be eased significantly. However, as you may realize, Xerox was keenly aware and concerned that its employees could have faced difficulties in commuting to and from work had the crisis continued and worsened.

A considerable number of alternatives were reviewed at the Corporate level to assist our employees in their transportation to and from work. Some actions that were taken are as follows:

- Xerox supported the "Oregon Plan".  
The Oregon Plan is the system adopted in many states in which drivers can purchase gas on only odd or even days, and are required to have less than a half tank of gas prior to purchase.
- Xerox established a car pool program in Monroe County and in El Segundo.

A program to assist employees in forming car pools has been established at seven (7) locations throughout Monroe County and two (2) locations in El Segundo.

Even with these steps that were implemented and other steps considered, it did not appear possible to fully assure that all employees would be able to travel to work on a regular basis should the energy crisis have become very severe.

Other contingency plans were considered which would have maximized protection to Xerox revenue by assuring salesmen, technical representatives, and other vital employees were able to perform their jobs. However, with the easing of the crisis, it does not appear implementation of those steps will be necessary.

**Question 5:**

1. The Sigma Software Education staff is now based on the West Coast. How does ISD plan to provide training for Timesharing Services Center personnel located in Webster?
2. Will the Leesburg facility provide Sigma Software Education? If so, when?

**Answer:**

1. The training question is something I expect line management to answer, at the Center manager level. Therefore, I have asked Wes Baker to respond directly to anyone who has this problem on his mind. But let me generalize from this specific issue. I view training and education as the responsibility of management, at the lowest possible level. A manager who is entrusted with ISD resources has to apply judgment to balancing not only budgets, schedules and priorities, but most importantly the quality of his professional results with the quality of his human resources. In this balancing act, software training is only one of many other trade-off decisions to be made. When I advocate decentralization for management within ISD, I especially mean decentralization of the education budget and training priorities into the hands of the Center managers, and by delegation, even lower in the organization. In this particular case the manager of the Timesharing Services Center must see to it that enough budget is available to secure his people with adequate training opportunities. If the least costly solution means travel to the West Coast, then that's what we will have to do.
2. According to Dr. Win Allen at Leesburg, Sigma software subjects will be included in the future curriculum. The specific dates are not as yet available. Incidentally, the first classes at Leesburg for copier sales people are now beginning.

**Question 6:**

**Current organization changes show a trend towards Business Centers. Would you elaborate on the rationale of this trend and the impact it will have on ISD functions?**

**Answer:**

The Business Center concept arises out of my strong belief that to manage any undertaking, one must structure real jobs for individuals so that they can have the fullest possible responsibility, accountability and authority for getting a job accomplished. Since bureaucratic managers always want authority delegated to them from the top, but insist on holding centralized power themselves (when it comes time to delegate power to those below them), I felt that it was very important for me to demonstrate my own commitment to decentralization. Ever since ISD was formed, I tried to do this, but did not have good luck at it. As a matter of fact, I

found increasing signs that ISD was acquiring the same symptoms as in any bureaucracy: decisions by staff assistants, heavy financial controls, schedule and resource priorities passed on upwards, etc. That's how I decided that I had to break up the organization structure into smaller units and in the process force a rethinking of the authorization levels, accounting practices and budgetary decision-making in ISD.

The results of this break-up of ISD into 16 centers has so far exceeded all of my expectations. I only hope that the spirit of initiative that has been thus kindled will not die on us as the managers with new authority at their disposal acquire bad habits.

I believe, however, that it will be very hard, from now on, for any individual to turn the clock back on the Business Center concept, since it is such a natural fit for the information services environment. Personally, I intend to do everything possible to extend and further strengthen this operating method.

Let me say that Corporate Management is very pleased with the way the ISD Managers have responded to Business Center decentralization and continue to be warmly supportive of our operating mode. As a matter of fact, Peter McColough and Ray Hay were most pleased with what we have done and have mentioned with favor our experiences in decentralized operations.

**Question 7:**

**What action has ISD taken — or plan to take — to improve Office Information Systems? What will be the role of different ISD functions to achieve this objective?**

**Answer:**

As you may know, Mary Richards' APC (Administrative Processing Center) experiment at the Seneca Building has had a tremendous impact on the perceptions of many people regarding the role of secretarial and administrative (para-professional) people. I expect that the APC operating mode will become generally accepted as the operating environment throughout Xerox within two to four years. As of this moment, I know of at least ten APC's either in formation or planning stage. That's not too bad for a concept we began testing less than one year ago!

But the real payoff from the APC's will come when we begin introducing quantities of new technology based devices into the APC environment as a means for increasing their service levels, their ability to carry out new functions and their capability for rapidly lowering the unit administrative costs for office operations.

That's why we have recently created a "line" Administrative Operations Department, at equal levels with Computer Operations, Software Development, Telecommunications and Management Sciences. I expect Administrative Operations to

be the most rapidly expanding part of ISD as we begin integrating relatively low technology tasks with hardware functions which are now isolated and not part of an overall system such as:

- copying and duplicating
- mail handling
- filing
- information retrieval
- document creation and text editing
- remote conferencing by electronic means

In each of the above areas, technology already offers exciting new hardware and software products, and I expect various application development units of ISD (OPS, SBO, TELECOM) to be increasingly engaged in technology testing contracts which ADMIN OPS would install and operate on a facility management basis.

This does not mean, however, that ISD would end up operating all Administrative Centers in Xerox. Far from that. I see ADMIN OPS purely as a transitory stage especially suited for high technology, experimental or Corporate functions. Thus, the primary mission of ADMIN OPS is to serve as a test and demonstration site to help other units of Xerox to understand better the directions toward the "Office of the Future".

**Question 8:**

**Are there any plans to make ISD a revenue producing organization for Xerox, i.e., selling services outside?**

Answer:

No.

**Question 9:**

**Is it feasible — and desirable — to bring all Xerox computer installations under one organization, i.e., XEG, RTCC, XCS, EOS, etc.? Would such a move be advantageous and beneficial to the Corporation?**

Answer:

As you undoubtedly may realize, about half of ISD's growth over the past two years has come from functions or installations being merged into ISD. In each case, Corporate Management as well as myself have insisted on a careful, yet deliberate, analysis of whether consolidation makes sense in an overwhelming way. I share the belief of many top Xerox executives that, "If in doubt, decentralize". For instance, in one case I had refused for ISD to take over a major computer installation, inasmuch as from the standpoint of technology, economy of scale or spreading the cost of fixed overhead nothing was to be gained.

There are, however, some exploratory studies now underway at the Corporate level which may ultimately result in some adjustment in the ISD structure. In one case the outcome may be an "acquisition", in another a "divestment". These terms, however, almost lose meaning when one considers the almost completely modular structure of ISD which means that any new added activity would be operated in a decentralized mode. Consequently, the justification for adding anything further to ISD would have to rest on a similar reasoning as applied to conglomerate acquisition. This means that Corporate Management would expect ISD to apply better management techniques and get more effective resource utilization that goes with the ISD "style" of management.



if in doubt, decentralize . . . . .



. . . . . adjustment in the ISD structure



acquisition . . . . . divestment



more effective resource utilization . . . . .

**Question 10:**

How soon do you see ISD assuming direct responsibility for international data processing and telecommunications systems (as opposed to the current staff consulting role)?

Answer:

Actually, the role is not purely "staff" any more. Several ISD Departments have Task Orders to do and implement special tasks where our expertise is in demand. Also, we intend to perform certain operating services, such as Administrative message switching, where centralized services make obvious economic sense.

But with regard to general systems activities, I believe that the policy of maximum possible decentralization continues to make sense because there is little that ISD has to contribute internationally, in a direct administrative mode. The comments that I have made under the prior question regarding "mergers" and "acquisitions" by ISD apply even more forcefully in the multinational context. Right now one of our most important Corporate tasks is the development of centers of technological competence throughout the world which would equal or better our USO capabilities. Even though ISD will help in the build-up of the new international regional competence centers as needed, direct line operations from the USA by US nationals under exclusive USO control are out of the question in the long run because they violate the spirit of a multinational enterprise.

**Question 11:**

Is there a Corporate policy on "no-growth" in Rochester? If so, how and when is ISD going to implement this policy?

Answer:

There is no Corporate policy on "no growth" in Rochester. So far as ISD is concerned, however, we must consider location of ISD users, existing ISD resources and our ability to recruit into Rochester a greater diversity of talent than is currently available to us.

Personally, I believe that we have an undue concentration of highly specialized talent in Monroe County. Because it is prudent to diversify any venture, we are now actively pursuing the possibility of creating an XCC No. 3 at another site, to accommodate further increases in manpower projected for the end of this decade. Needless to say, our ability to establish new facilities outside of Monroe County is partially limited by the location of our users. In the next few years I expect that technology will make this direct dependency not as dominating on our location decisions as is currently the case.

**Question 12:**

1. If more resources were committed to in-house education for the Systems and Data Processing community, wouldn't Xerox realize real \$ savings by not sending their

people to outside courses, seminars, etc.?

2. Will Xerox ever provide in-house S & DP education that is relatively equivalent to ISG-Marketing?

Answer:

1. We sometimes save more money sending people to outside courses than offering these courses in-house. If a highly technical course which would require months for us to develop is desired by only a handful of people, we will encourage them to use external education. On the other hand, a course of more general interest needed by almost all programmers is ideal for in-house education.

The market for new courses as well as for existing courses is continually being tested. A questionnaire used in such an evaluation was distributed to ISD Management in May. If the results of this market survey clearly indicate a need for more resources within in-house education, such recommendations will be made.

2. I am not sure exactly what is meant by "equivalent to ISG-Marketing". Within ISG there are several education functions, one of which is responsible for providing training to potential and current users of Xerox computers. This ISG function has a limited subject area; that is, they teach those subjects, and only those subjects, having to do with Xerox-marketed products (UTS, CPV, DBM, DMS, etc.). ISD Education must provide for the needs of the internal Xerox DP community, and is restricted by pricing constraints. This means that ISD Education must cover several operating systems from several vendors, plus operator training, plus systems and management training. First, there must be sufficient demand and enough potential students to make development of a course worthwhile; and second, ISD Education must collect enough revenues from offering those courses to recover the original costs. ISG, on the other hand, offers many courses as "sales motivation"; this means the costs of these courses is absorbed as "marketing overhead" and the numbers of students and demand is to some degree irrelevant.

To summarize, there are two basic differences between ISD and ISG DP education activities: (1) ISG is interested only in Xerox Computer technology, while ISD is concerned with a wide universe of activities, and (2) ISG operates as a part of the overall Xerox computer marketing effort, offering classes in the hope of attracting as yet unidentified customers, while ISD offers courses only after some potential student demand has been identified. Therefore, ISD Education will, and has, offered the same courses as ISG when and if sufficient demand exists; otherwise, the two education groups have different missions and operate under different sets of financial constraints.

**Question 13:**

Are there plans to utilize more extensively RJE, i.e., terminals for all users instead of mail, messenger service, etc.?

Answer:

The answer to your question is definitely yes. The Remote Job Entry Computing Center is currently working in several areas to implement new terminal sites and upgrade and expand existing terminal sites. Some current activities include:

- Expanded service to the Henrietta Terminal Site. Implemented service to Henrietta to receive punched input and transmit printed output in support of daily PPICS production. Benefit better service to Users and the elimination of the need for a truck to pick up and deliver data to Henrietta.
- New installation to Basket Road facility for service to National Services and Distribution. This site will consist of a 370/125 linked to the 370/155 at XCC.
- New line to El Segundo in March to support the Current Systems Department. The purpose is for testing of the Xerox 530 Satellite Processor with special emphasis on IBM host compatibility.
- Several new sites are being reviewed for implementation in 1974, Toronto, Dallas and Monroe County.
- Work is in process to convert some current terminals to multi-purpose with communication links to ISD Timesharing, Univac 1106 and 370/155 to better serve the needs of the Users at these remote sites.

RJE is not, however, an effective technology to replace messenger service and mail. I see a completely new set of technologies emerging for our use in the next few years. In this respect ISD is actually in the forefront of development for Xerox. Our Telenet add-on permitting the use of facsimile output terminals delivers overseas telegrams by means of facsimile on our leased lines. Our expanded computer controlled data communications network will do this on a much longer scale, interconnecting facsimile stations and mailrooms in London, Stamford, Rochester, Dallas and El Segundo. The big prize ahead, is when ISD will begin remote document creation in our APC's with one another to give our document creation technicians direct point-to-point mail capabilities electronically. Since both the expanded computer controlled data communications network and the APC's remote document creation are due to be operational in the near future, the ISD people can expect to have lots of experience with innovative approaches.

**Question 14:**

Xerox Corporation is made up of "Groups". Why is Information Services a Division?

Answer:

The "Group" title is reserved only for major operating units of the company. Information Services does not fall under that category.

**Question 15:**

Why do we give our chief competitor large gains in cash flow, etc., by not using Sigma equipment as central processors?

Answer:

Whenever we can, we use Sigma equipment.

**Question 16:**

Is Data Processing going to be decentralized?

Answer:

Yes. XCC No. 1 is now in 4 separate units. Also, processing will become more decentralized because it is now more economical to place equipment at local sites. Out of 152 CPU's now in Xerox, only 27 are at multi-CPU sites.

I am especially pleased with our NBDE decentralization program that will place 87 CPU's at individual Branches and RDC's in 1974. I see more of this trend to continue.

**Question 17:**

What is the major technological challenge for ISD now – and in the future?

Answer:

There are so many new challenges as well as old accumulated problems that I am having difficulty picking any one in particular. If I have to choose one which concerns me most right now, I would say that the major challenge is in the software development area: How do we produce new application code more effectively? How do we improve its maintainability and how do we safeguard this increasingly valuable corporate asset from technological obsolescence as new processing capabilities make it desirable to reconfigure our operational environment?

Luckily, we have a very imaginative group in the Webster Development Center of Software Business Operations who have thought about this problem for some time and who are coming up with good and fairly radical new answers. I must also compliment the foresight of the ITG Group Staff who have decided to bet on this new approach. When proven to be a success, this effort may set the standard for software development throughout Xerox for the next decade, and this problem may go away.

**Question 18:**

Within ISD, what is today's largest problem?

Answer:

Without doubt it is human resources management. I do not think that we have as yet learned how to free the creative energies and capabilities of our people. We do not know how to break down tasks so that autonomous teams of individuals



could gain a sense of control over the nature of their work. Even in cases where we have managed to create work structures at the team level, we have made mistakes in integrating teams into an overall framework. In the years to come, I expect to spend more effort working on this problem than anything else on my agenda. I have a hunch, however, that new technology will give us many more management options than is currently the case.

**Question 19:**

**Within ISD, what is the most significant achievement to date?**

Answer:

That it works. That it did not collapse as many observers predicted.

**Question 20:**

**What service(s) will XCC-West provide?**

Answer:

At the present time XCC-West is organized to serve:

- Manufacturing and Financial applications for ITG-EI Segundo.
- Financial and Market Analysis applications for ISD-EI Segundo.
- Remote Processing requirements of Irvine Reconditioning Center.
- On-line ISD Programming/Testing requirements.

With two fully operational Sigma 9 Systems, XCC-West will additionally provide:

- APL capability to the Western area.
- Data Exchange with ISD XCC-East (i.e., Personnel/ Payroll).
- Expanded Remote Processing capacity.
- A focal point throughout Xerox for CP-5 operating system enhancements.

**Question 21:**

**Is there a current or long range plan to restructure the systems and programming organizations or responsibilities into one unit with all functions?**

Answer:

No.

I see the systems analysis function irrevocably residing as closely as possible to user top management. It will be a different function than currently is the case. It will be primarily people, function, objective oriented and will have its hands full by being part of the functional executive management. It must evolve in this direction, because this is the only way systems people and systems concepts can ever become integrated into the decision-making structure of our company.

The custody of the technical resources supporting information processing will be in the hands of the information services organization. What we witness in Xerox today is a first step in this evolutionary development which has a goal to ultimately achieve a differentiation between the "ends" and "means" achieving tasks.

The borderline between users (who state the needs) and information technologists (who implement the objectives) will remain fluid. Therefore, I hope that nobody expects me to take any fixed positions on the division between "systems" and "programming" for any extended time period. For instance, I expect that interactive and applications specialized languages will in fact enhance the capabilities of the user/systems specialists to execute tasks for which programmers are so poorly used today.

**Question 22:**

**Much has been said about the marriage of systems and programming personnel under common management with "functional" systems personnel reporting to line management. Would you please say something about this and also comment on how well the current organizational alignments between ISD and other operating divisions are working out?**

Answer:

I believe that the current alignment is working very well. For the first time in the history of Xerox we have people dedicated to planning applications, to setting implementation priorities and to managing the tie-in with business objectives. For the first time we have the beginning of fairly good long range plans. I can state without reservations that it took the separation of systems planners from everyday fire-fighting to achieve this improvement in our affairs.

On the other side, for the first time I find that both schedule and cost commitment are being met with a reasonable degree of reliability. In operations, we have for the first time a highly professional, well motivated, well resourced capability across the board.

As seen from top management standpoint, ISD and the ISD service concept is a solid success, even though the beginnings were rocky. ISD is even viewed as a prototype concept to be expanded to other service functions — an ultimate compliment any organization can receive.

It may be of interest that ISD is now considered so viable that it can be set with its own policy-making organization which is independent of Corporate. In the next few days we will be announcing the appointment of a separate "Board" consisting of principal ISD users and chaired by David Kearns. It will serve as a means of directing and assessing strategies used in ISD's Long Range Planning and Operating Planning cycles.

**Question 23:**

Do you ever communicate directly — on a one-to-one basis — with ISD employees at the bottom of the organization charts, or is the management line the source and recipient of direct communication?

Answer:

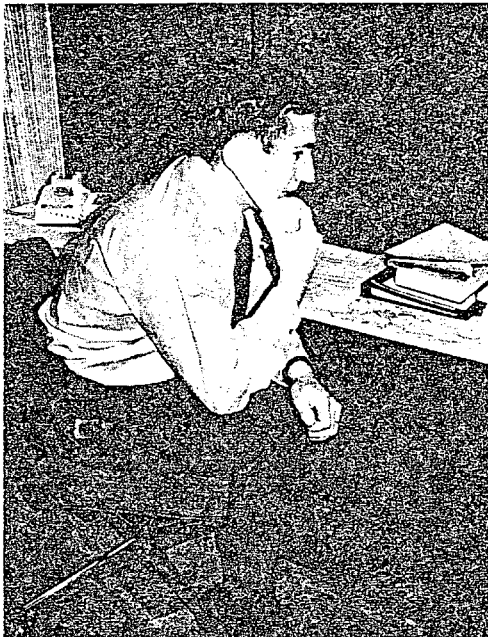
To the dismay of some of my more orderly managers, I absolutely insist on open channels of communications to all ISD people.

In addition to frequent appeals from individuals who find that they have run into a dead end, I personally get involved in all cases involving an ombudsman. I also make it a habit to call everyone who gets a rating "5" in a performance appraisal.

At the other extreme, I get to see all exit interviews with exempt personnel and have called them, on occasion, after they left the company if I had known them previously.

As an added communications channel, I find especially useful monthly informal meetings with 10-15 randomly selected employees at all levels. These meetings are totally unstructured and have been a source of good insights into thoughts of many individuals.

You may also recall that we try to get both anonymous questions as well as direct questions from the floor during our Divisional meetings. The questions in this particular interview — as tough as they are — certainly reflect what I believe is a need for open communications channels. All questions that were submitted are answered and are quoted without any alteration in text.



"I also make it a habit to call everyone who gets a rating 5 in a performance appraisal."

**Question 24:**

With the majority of ISD personnel and operations in Monroe County, why are you located in Stamford?

Answer:

More than half of my personal time is spent on Corporate issues requiring close inter-action with people in Stamford and in travel or meetings which are outside of Rochester anyway. Since many of the new ventures that I am working on right now will most likely involve sites outside Monroe County, my focus is perhaps best where I am. It has also something to do with my personal habits. I believe that a professional technology manager is not just a coordinator, a runner and a doer. I earmark material portions of my time for work I do as a single contributor or as a consultant. I also devote a significant part of my time to personal activities working on public committees and advisory boards. Most of these are based in New York. I believe this is essential for anyone who does not want to stagnate as a manager — sustaining himself as a functioning bureaucrat. If I would reside in Rochester, I bet I would have to attend four times more meetings than is currently the case, and have no time for planning and professional self-development.

**Question 25:**

In terms of overall expense, in which functional area do you forecast the fastest growth rate? Why?

Answer:

I assume that the question relates to the growth rate in information systems expenses. If that's the case, then the answer is Field Service, Customer Engineering support.

Why? Because it has the lowest utilization of information services per capita of any function. Because it is the largest and logistically most important function in Xerox. Because I believe that we can greatly improve service productivity.

**Question 26:**

Why do we seemingly lag in updating our equipment?

- 360's rather than 370 virtual storage.
- 2314's rather than 3330's.
- 360-65's and 155 not interconnected.
- No interactive testing.
- Lateness in getting RJE's.

Answer:

In my own sense of priorities, the updating of hardware has always been of lesser concern than the updating of management talent and improvement of organization structure.

The XCC has gone in the last two years through a major upheaval in the management process by which it was run. We have finally achieved a degree of systematization and structuring which is an essential pre-condition for a modern "utility" environment.

During such an upheaval, the last thing one does is to upset equipment configurations unnecessarily. When we did it — on a very small scale — such as our experiments with plug compatible vendors, LCS and when we brought all 360's on the same version of OS, the management processes floundered badly. This is why in the past I have deliberately held back on other developments, especially since users' own long range plans left much to be desired.

I believe that 1974 is a turning point. We are moving into 370's with a much greater degree of confidence because we have finally acquired a performance measurement capability we can trust. As a matter of fact, we may actually be getting some capacity measurement results I can believe.

The 3330 program has begun implementation, and I have high hopes of its success.

The case for interconnecting the 360/65's and the 370/155 is yet to be made, and I am not at all convinced this would be "progress" anyway. The same applies on switching to VS. Solid evidence in most shops with a comparable workload structure to ours is yet to come out that VS is a good bet. In the case of COIN, however, it is clear that VS is right, and we have already installed it.

On interactive testing — that expensive and luxury tool needs much more proof as to its productivity before I think we get our money's worth by spending an additional \$5-\$8,000 per programmer per annum on testing costs. First I would like to see the best possible RJE testing services with short turnarounds before we bench-mark instant turnaround benefits. I am sure that interactive would win hands down against any poor RJE set-up. Meanwhile, we are proceeding with two large scale interactive tests in Rochester and one in El Segundo.

**Question 27:**

**At the present time, there does not appear to be any effort to effect transfers of personnel (management and otherwise) between WPC, RPC, XCC. In fact, it seems we avoid doing so. What is our actual policy?**

Answer:

The policy *and* practice is clear that transfers shall take place. Perhaps the practice is not as good as we may wish, but there are too numerous cases to say that we are avoiding it.

**Question 28:**

**In general, we have been in the past relatively slow or ineffective in providing the first line manager with management tools, i.e., testing reports (turnaround, number of tests per programmer per job, CPU and dollar charges), project management reporting, PC70, TOSS (still not an accepted system). Is anything currently planned in this area?**

Answer:

I agree that we have been unsatisfactory in this area. Through all of the budget reviews and cuts we have managed so far to protect a substantial investment in 1974 to improve these deficiencies. As I recall, we have about a dozen projects tackling these defects. Call John Lazar for more details. I have also asked John to write a separate article on this subject for one of the forthcoming issues of this publication.

**Question 29:**

**We currently have difficulty in getting the Systems organization to:**

- Document their requirements.
- Not start projects until they are ready.
- Document revised schedules, costs, additional requirements.
- Communicate to the ultimate user ISD's appraisal of project status.
- Give or secure approval prior to implementation.

**Question 30:**

**Conversely, attempts to force these issues generally result in a "not responding to our requirements" quote by Systems which results in pressure on the first line manager to "get things moving". Any chance for improved conditions in the future?**

Answer (29 and 30):

Yes.

I expect these conditions to turn around rapidly as a new management perspective gets hold in the Systems organizations. I sense a renewed recognition of urgency to give the Systems people a clearer identity and a better understanding as to their unique mission. One of the casualties in the split between systems and programming two years ago was the relatively difficult life for some of our systems people who were left organizationally and conceptually shrouded in the middle of a vacuum.

**Question 31:**

**Is it acceptable to publish our project status to both the Systems users and the ultimate user?**

Answer:

Every Task Order has only one user to whom you are accountable. He should get the project status report. If your user is not acting as a responsible party, you have other recourse than circumventing proper communications channels. The recourse is, of course, to take up the matter with your supervisor.

**Question 32:**

Are there any plans to put together a management development program which would address those areas in which most managers should receive training — telecommunications, general management (leadership, motivation, etc.), experience in XCC operations?

Answer:

We are to shortly announce the implementation of a Core pre-management and management training program. This program coupled with the other training available to our people will provide many of the experiences a manager should have.

As I understand the question, however, it implies a process I wish to discuss. It suggests some sort of an approach — not unlike in the elementary or secondary educational systems — where some superior authority will decide what are the prerequisites for management development. Then the individual will go through the process and thus will be "developed".

Well, my concept of development differs from the above. Development is primarily what an individual does for himself — the jobs he performs, the assignments he seeks, the books and periodicals he reads, the people he talks to, the person he works for. Courses are only incidental to this process.

The individual's manager also has a crucial role to play. It is his/her responsibility to actively support, counsel, and guide the individual in the achievement of development needs.

Although ISD provides significant formal training and development responsibilities for its people, we must remember that even then primary management development occurs on the job through the efforts of the individual and his manager.

**Question 33:**

A great deal of emphasis is placed on staffing to budgeted headcount, yet we are not supported by: (1) recruiting personnel; (2) recruiting budget (i.e., we must absorb cost of recruiting trips).

Answer:

Much effort and resources are being devoted to staffing ISD to its budgeted manpower level. Through April 30 of this year, this division has interviewed 259 people with 80 new employees starting. Additionally, there are many offers outstanding and offers accepted where employees have not yet begun to work. In 1974, ISD will spend close to a million dollars in support of staffing to planned levels.

As implied in your memo, however, we have been delayed in achieving planned staffing levels, and part of this shortfall relates to limited recruiting resources. Since preparing the operating plan for Employment, the number of required net hires has more than doubled. This increase was caused by our division closing 1973 below its manpower plan and various new business proposals approved in 1974. To meet these

additional requirements, we have increased the use of outside employment agencies, added recruiters to the staff, and have asked hiring managers to participate more fully in the recruitment process. We feel through the above actions we will minimize the plan negative variance and achieve plan early in the third quarter of 1974.

To answer the second part of your question, for the first time in 1974, a separate budget center has been established for Employment. Approved recruiting trips will be paid for by this budget center.

**Question 34:**

Most of Webster Programming Center's effort is expended in support of ITG Manufacturing and R&E. Standards for Information Systems personnel are developed by the SAC and normally followed, unless there are good, sound business reasons not to, by WPC and the ITG Systems organizations. ISG and XLG also have representation on the SAC. To what extent are standards for phase review, documentation, working relationships and other procedures promulgated within the ISG and XLG systems and functional organizations? What sanctions, if any, are placed on those organizations which do not adhere to published guidelines, procedures, policies, and standards and by whom?

Answer:

On the first question, the same standards apply to ISG and XLG as to ITG.

With regard to the second question, the sanctions are clear. Either Corporate Performance Assurance Audit or Corporate Staff calls any deviation to the attention of senior line management.

**Question 35:**

There is a trend in some areas towards purchase/lease of data conversion, OCR, mini-computer, small scale hardware configuration and other equipment which is to facilitate data collection, conversion, consolidation, edit and validation of data in preparation for input to the main processing computers/systems at the XCC and elsewhere. To what extent is the growth of these "offshoot" small processing facilities being curtailed so that ISD, through the XCC, still is the main processing capability with Xerox? To what extent is ISD, through Software Business Operations, committed to, or should we be committed to, supporting these offshoot functions when they, in fact, feed the major critical areas within planning and control systems for which we are responsible?

Answer:

The policy on "offshoot" processing should not be difficult to understand. As long as all processing is input/output oriented and does not involve residency of a significant data base, such processing is encouraged as a matter of policy, if economically justified. Incidentally, I believe that such installations will become increasingly attractive as a most efficient means to decentralize paper-intensive functions. The 1973

ISD Long Range Plan specifically endorsed the creation of satellite processing capabilities.

With regard to SBO — that's clearly a question of establishing systems integrity. If critical areas are involved, central software support and control is mandatory.

**Question 36:**

ISD, since its inception, has been severely hampered in attempts to meet contracts, increase production, improve morale and move personnel freely due to extremely poor or non-existent planning on the part of the systems communities we service. What efforts above section level are being taken in an attempt to convince operating and systems management that there is no substitute for good planning both at the outset of the year and at all times during the year, continuity of project responsibilities, continuity of priorities from day to day, etc.? What, if any, controls are in place to highlight the scope and magnitude of this problem to senior operating management levels?

Answer:

During the last year I have spent most of my time, in my staff capacity, dealing with this issue. Senior executive management has reviewed and addressed this issue on several occasions. Any defects in this area will continue to be a matter requiring a Corporate Staff activity. I believe that 1974 will be seen as a turnaround year for good long range systems planning.

**Question 37:**

Why is it so difficult to obtain budgetary approvals for projects and project related expenses, which are going to come about inevitably, that could provide immediate pay-back in the form of increased service levels to our customers, better control over our own resources, improved productivity and morale, greater personal satisfaction and development, and a better picture of ISD to our customers?

Answer:

Because sometimes it is not so easy to prove that all of these goodies are going to be there after the money is appropriated and spent. Even with a large budget increase for 1974, about one-half of all budget requests had to be re-prioritized. It finally boils down to a question of affordability. I cannot answer this question generally, only specifically with regard to a particular project which may have been dropped.

**Question 38:**

Are ISD and ISG going to merge together?

Answer:

No.

**Question 39:**

If President Nixon's plan to lift wage and price controls goes through, how will this affect Xerox policy on the current ceiling of a 6.6% performance appraisal increase?

Answer:

Action was taken already with the 3% general increase to supplement our merit increase program. (See also Question 3).

**Question 40:**

Is a program being developed for the promotions of individuals to the technical side of the dual ladder structure — for Applications Programming?

Answer:

Perhaps I do not understand what the questioner is aiming at, but "dual ladder" does not exclude Applications Programming. The program we have operates as follows:

In the Fall of each year, the technical Dual Ladder needs of Software Business Operations for the next year are reviewed by SBO management, Personnel, and myself. Positions requiring the skill levels of a Programming Consultant or a Senior Programming Consultant are specifically identified. In 1974, a total of 42 technical Dual Ladder positions have been identified in SBO (this includes the addition of two Senior Consultants and one Consultant position in the incremental Supercede project approval). This number is then broken down by programming centers. Software Business Operations management is committed to fill as many of these openings as possible from qualified candidates internal to SBO. To this extent, all openings at the Programming Consultant and Senior Consultant levels are posted as part of the pilot Job Posting program.

Job Posting, however, is generally recognized as not being totally successful. ISD Personnel and SBO management are now looking into ways to modify the current Job Posting procedure to further insure that every qualified internal candidate for technical Dual Ladder positions is seriously considered for each opening. Changes to the Job Posting system are planned to be announced soon.

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**Information Security  
is Everyone's Business**

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... discussing a legal point with Ernie Auerbach.

**Question 41:**

Has any compensation plan been decided upon for those employees who were promised profit sharing before they were hired and then found out months later that they were ineligible? What has been done to insure that future new hires will not be given false information of such an important financial nature?

**Answer:**

From your question, it appears that some employees may have been given misinformation concerning their profit sharing eligibility.

I personally extend my apologies to any employee who did not receive accurately stated profit sharing information. I regret that it is not possible to provide profit sharing or other substitute compensation to any non-qualified individual for the following reasons:

- It is not permissible to provide profit sharing to individuals unless they fall within the eligibility requirements as specified in the bylaws of the Profit Sharing Plan.
- Substitute compensation does not seem appropriate since it would be very difficult to ascertain which employees may have been given misinformation. Further, it would be unfair to provide these employees with special compensation when hundreds of Xerox employees not fitting eligibility requirements would receive none.

To insure that future new hires receive correct information concerning their profit sharing, we have re-communicated to people responsible for recruitment the eligibility requirements of the Xerox Profit Sharing Plan.

**Question 42:**

Why do the users have the capability to go outside the Company to have any new systems or rewrites done, when the people here are as good or better than those on the outside? It seems we have built a programming staff to maintain and fix the garbage written outside the Company. They get paid by how fast they write the systems not how good they are.

**Answer:**

SBO has an opportunity to review and comment on all outside software contracts prior to their placement.

This procedure has not worked well in the past, but now I am convinced it is tight and allows for anticipating any quick-and-dirty solutions. If, after appropriate review, the user still wishes to opt for an outside vendor, he may do so with the understanding of ultimate consequences.

**Question 43:**

Is ISG parent to ISD in the current organizational structure? This question requires clarification because the posture taken by ISG implies ISD to be a subgroup of ISG. Consequently, this is the source of a detrimental effect on morale and on the quality of work produced in both organizations. Thus, it is the user and Xerox as a whole who suffer most in the end.

**Answer:**

ISG is not a "parent" to ISD. ISD's relationship with any organization is that of a vendor-supplier set-up operating in a non-competitive award (single source) environment.

The standards of behavior call for a thoroughly professional conduct by all parties. Mutual respect as well as the ultimate resort of either party to refuse to compromise its standards of excellence are understood to underlie this relationship.

**Question 44:**

When will the new Data Center in Nice, France, be opened? Will U.S. personnel be recruited to staff it? If so,

- A. What type of personnel (technical/managerial)?
- B. When?
- C. For what term of service?

**Answer:**

Nice is expected to open late in 1975. U.S. personnel will not be recruited because this is a RXL site to be staffed by RXL nationals.

U.S.A. nationals would be placed only if:

- They intend to reside permanently in France, under local compensation conditions, and if hired by local recruiting.
- Special circumstances reveal the inability to hire local nationals and require a short-term loan of a highly

experienced specialist. Such a loan would be made only after review and approval at the President level.

**Question 45:**

Since ISD is going to take a bigger role in the Systems Analysis & Design function, I would like to know the responsibilities of this new position. How will this position interface with ISG Systems and the ISG user?

Answer:

This is a misunderstanding. ISD is performing a Systems Analysis function on a contract basis only for those few users who cannot or do not wish to have their own dedicated personnel. This applies only to some Corporate users.

It does not apply to ISG at all.

**Question 46:**

Does the creation of a new level of job, i.e., Deputy Director, imply restructuring of ISD at upper management levels?

Answer:

No. The "Deputy Director" title is given specifically to provide Corporate Staff support to Joe Flavin in International Operations. Because International Operations does not have any staff at all in Stamford, it was essential to identify in each function an individual who could act as an "international" deputy.

Jim Sutter's Corporate Staff functions and Corporate title are therefore international. No restructuring of ISD is implied.

**Question 47:**

As an index of how successfully the systems people have been integrated with the functional users, what percentage of systems people have actually moved into line jobs in the functional organization? How well received is this line of progression by the systems community?

Answer:

Bob Benjamin tells me that the movement in the past 18 months was about 15% in ISG. In Engineering it is 30%; in Manufacturing 7-10%. To me, these figures look pretty encouraging.

**Question 48:**

Since Xerox continually stresses quality and high levels of service in relation to our copier products, when will the Data Center move toward establishing a "contingency load" factor in their Capacity Planning and significantly reduce the percentage of "late" jobs?

Answer:

We have established a project to clearly define capacity as it

relates to service level. I am not especially hopeful that we will have really hard results soon. The problems we face concerning lateness of jobs cannot, however, consider capacity as an absolute. Unless capacity is infinite, which it will not be, there will be periods when demand for service will exceed capacity.

In our determination of capacity, we will look very closely at periodic peaks of demand and attempt to accommodate them — and projected future demands — in a cost effective manner. We are also trying to shift peaks by means of discount pricing.

In all, I do not have any good answers in this tough area. Facts are hard to come by. Biases and opinions remain plentiful.

**Question 49:**

Some people feel the current job position program doesn't achieve its purpose, and it is widely believed many of the jobs have an "owner" before the posting is made. To offset this, please state the percentage and number of jobs that have been filled by applicants (during the First Quarter) who responded to a specific posting.

Answer:

Your comment refers to the pilot program in Software Business Operations which requires all non-stock option eligible open positions at or above \$24,333 be posted. You indicate that many jobs may have had an "owner" before posting. Quite simply, as your comment implies, that was the case with a few of the earliest postings. Managers were not totally accustomed to the new approach and, in some cases, extended "informal" offers prior to being reminded that the positions had to be posted. However, to my knowledge, this is not currently the situation.

You must, nevertheless, recognize that in many cases and, perhaps in most, the best qualified person for a particular management or consultant level position may lie in the area of the opening. This occurs since it is likely that the experience and background required for the open position is among those found in the immediate organization with the position opening or in related organizations. Since the hiring manager would be familiar with the credentials of people from those areas, it is very possible that the hiring manager, prior to posting, has identified a few highly probable candidates. The importance of posting, then, is to permit the hiring manager to consider qualified people from other areas prior to making the final decision.

In terms of the data you request, there were 25 positions posted in the First Quarter. Of these 25 positions, 8 were filled with candidates who applied through the job posting system (although some of these eight may have been known by the hiring manager prior to posting since they were part of the hiring organization). Of the 17 positions in which job

posting candidates were not selected, some still remain open, some were filled with candidates recommended through job circulation procedure (which circulates open management and consultant positions with midpoints at or above \$24,333 to top management throughout the Xerox Information Systems community) and other candidate sources.

We have recently reviewed the positive and negative experiences we have had with the job posting pilot program. Based on this review, as noted in answer to Question 40, changes to the job posting system are planned for announcement shortly.

**Question 50:**

**Is there a conflict of interest in having the same individual serving in a Corporate Staff role and also a Division line managerial role?**

Answer:

Obviously yes. This question gets re-visited by various people at least semi-annually, especially after I get involved in unpopular decisions. It all depends on one's perception whether a system of fairly rigid and institutionalized checks and balances is essential to safeguard the integrity of any corporate function. I believe that in the case of Xerox, it is the presence of a strong Performance Assurance Audit function which makes the rigid separation of staff less mandatory than would be the case otherwise.

So far, Corporate Management has been satisfied to leave this anomaly as it is. I would like to note, however, that I am a strong believer in mixing staff and line assignments in any individual's development experience. I find that individuals get a much broader perspective if they can operate simultaneously in different operating modes.

**Question 51:**

**Why doesn't Xerox have a Co-Op Program for undergraduate students?**

Answer:

Xerox has various Co-Op programs. In ITG, there are approximately 100 Co-Op students in Research and Engineering. These Co-Op students are primarily engineers and chemists. Manufacturing also has a program, however, it is much smaller in size.

ISG has a very significant Co-Op program. They have over 50 Co-Op students. In Monroe County, they are active in diverse areas such as Marketing, Finance, Employment, Field Engineering and Data Sciences. In the Field, we have Co-Op students participating in our Field Engineering program.

In ISD, we have a small pilot Co-Op program this year with the National Technical Institute for the Deaf for deaf computer systems majors at Rochester Institute of Tech-

nology. We do plan to consider a Co-Op program for Programmer Trainees in our 1975 plan.

**Question 52:**

**Addressing the problem of insufficient facilities at XCC-East with respect to space for equipment, assigned personnel, and visiting support personnel – what are the plans for expanding the XCC-East facility?**

Answer:

My control statistics tell me that no ISD personnel is located in materially substandard office locations. Now, I have visited all locations and know that some of the facilities are make-shift. But they are not over-crowded as we were a year ago.

Expansion in floor space is not our major problem. It is, rather, one of convenience, quality, consolidation and access.

Currently, plans are underway to build another large office building in Monroe County, with ISD as one of its principal tenants. This project is still waiting for final resolution.

**Question 53:**

**What is the current status of ILIS, and what are the plans for its future?**

Answer:

The objectives of an International Logistics Information System (ILIS) are being vigorously pursued by the Corporation. These objectives include:

- multi-plant/multi-site automatic data interchange
- compatible data base technology
- compatible systems and software

The functional goal is an environment that allows inter-plant/inter-warehouse demand exchange, bill of material control multinationally, and lower (less dispersed) I/S development costs.

The ILIS program has been supplanted by an executive management board appointed by Bill Souders. The Multi-national Product Systems Board (MPS) has developed a corporate-wide policy to direct future I/S development in this area. In addition, software development by ITG, with RXL participation, has been endorsed by the MPS board as a way to introduce the needed flexibility upon which future information systems can be built. The personnel, formally assigned to Corporate Manufacturing as the "ILIS Group", are now part of ITG Group Systems.

For the future, individual tasks are being managed by MPS Board Members which are expected to lead to the compatibility objectives sought by the company.



**Question 54:**

Please discuss the future plans for Xerox Data Processing in regard to centralized versus decentralized computing centers.

Answer:

As I see it, we will have a highly decentralized, distributed, polyprocessor environment ten to fifteen years from now. However, the architecture for this computer network will be centrally conceived. What we are talking about is upward of 10,000 computer "processors" located throughout the world. Most of these will be "terminal" processors aiding local input/output devices and sensors to perform local functions with intelligence. For instance, a decentralized administrative "work station" may in fact have the computing power and specialized data management capability of a small scale "third generation" computer. Signals from these "work stations" would be gathered by means of a switched data message network which will by itself be a series of powerful computing facilities at each successive mode. As messages travel upward in the network, the power and control of the centralized architecture will become increasingly dominant. At the ends of these networks, I see specialized processors organized separately into:

- communication control processors
- application processors
- data base processors

which will be optimized around the operating systems software functions of each of them. As I see it, after 1980 the real major equipment configuration decisions will be a reflection of fundamental software organization decisions, not vice versa as is currently the case.

For instance, in Xerox I can see data bases residing on several dedicated data base processor computers, each specialized around successors of IMS, EDMS, IAS and a few other data base management systems. These data base processor computers will be interconnected to the networks' computers by means of specialized application processors hosting successors to OS, VMS, CP/V, APL, TEXT and other operating systems, except that at that time the "operating systems" will be much more modular so that we will be able to dedicate individual application computers to a fairly well defined sub-set of functions to be executed.

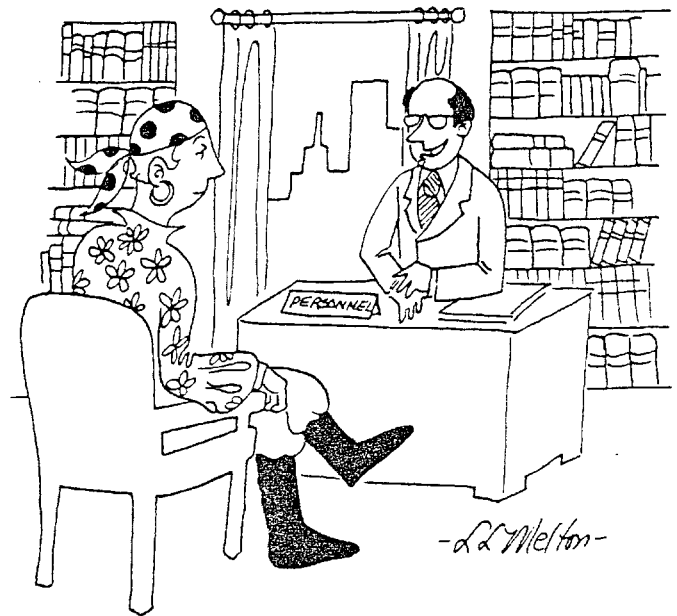
I am afraid that this question is far too complex to be answered as simply as I attempted to do above. Perhaps you may try taking elements of this problem as a leading question for a similar interview that I'll be glad to tackle later this year.

# XEROX

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## Company Information is One of Our Most Precious Assets.

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*"Don't tell me. Let me guess—you're a programmer, right?"*

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